Remarks

Claims 1, 3-19, 24, and 25 have been amended and new claims 26 and 27 have been added to more particularly point out and distinctly claim the subject matter Applicants regard as their invention. Claims 21, 22, and 23, have been canceled without prejudice. No new matter has been added.

More specifically, claims 1and 3 are amended for clarity. Claims 4-10 are amended for clarity and to eliminate multiple dependency. Support for the phrase "under high stringency conditions" is found at page 5, lines 13-18, and at page 12, lines 11-30. Claims 11-17, and 19, are amended for clarity, and for consistency with amended claim 4, 5, and 6. Claims 24, and 25, are amended to eliminate multiple dependency. Claim 18 is amended to recite an antibody having specific binding affinity to the polypeptide or portion thereof according to claim 12. New claims 26 and 27, recite the subject matter no longer claimed in claim 18; that is, an antibody having specific binding affinity to the polypeptide or portion thereof according to claims 13 and 14, respectively.

Conclusion

Applicants respectfully request that the amendments and remarks be entered and made of record in the instant application. An early allowance is earnestly requested.

Respectfully submitted,

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Enclosure

Application of: Roemer *et al.*

Application No.: To Be Assigned
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For: IDENTIFICATION OF *CANDIDA ALBICANS* ESSENTIAL FUNGAL SPECIFIC GENES AND USE THEREOF IN ANTIFUNGAL DRUG DISCOVERY

Attorney Docket No.: 10182-015-999

Appendix A: Marked-up Version of the Amended Claim

1. (Once Amended) An isolated nucleic acid comprising a nucleotide sequence encoding any one of the amino acid sequences selected from the group consisting of SEQ ID NOs: 2, 4 and 6, or the full complement thereof.

3. (Once Amended) An isolated nucleic acid comprising a nucleic acid sequence having at least 70% identity over at least one sequence window of 48 nucleotides with any [isolated nucleic acid] nucleotide sequence encoding an amino acid sequence selected from the group consisting of SEQ ID NOs: 2, 4 and 6, or the full complement thereof.

4. (Once Amended) The isolated nucleic acid of [one of] claim[s] 1, [2 or 3,] wherein the nucleotide sequence of [CaKRE5] is [as] set forth in SEQ ID NO: 1.

5. (Once Amended) The isolated nucleic acid of [one of] claim[s] 1, [2 or 3], wherein the nucleotide sequence [of CaALR1] is [as] set forth in SEQ ID NO: 3.

6. (Once Amended) The isolated nucleic acid of [one of] claim[s] 1, [2 or 3,] wherein the nucleotide sequence [of CaCDC24] is [as] set forth in SEQ ID NO: 5.

7. (Once Amended) A method of selecting a compound that modulates the activity of a protein [encoded by the CaKRE5 of claim 1, 2, 3 or 4] comprising the amino acid sequence of SEQ ID NO: 2, said method comprising:

a) incubating a candidate compound with said protein; and

b) determining the activity of said protein in the presence of said candidate compound,

wherein [a potential drug] the compound is selected when the activity of said protein in the presence of said candidate compound is measurably different than in the absence thereof.

8. (Once Amended) A method of selecting a compound that modulates the activity of a protein [encoded by the CaALR1 of claim 1, 2, 3 or 5] comprising the amino acid sequence of SEQ ID NO: 4, said method comprising:

a) incubating a candidate compound with said protein; and

b) determining the activity of said protein in the presence of said candidate compound,

wherein [a potential drug] the compound is selected when the activity of said protein in the presence of said candidate compound is measurably different than in the absence thereof.

9. (Once Amended) A method of selecting a compound that modulates the activity of a protein [encoded by the CaCDC24 of claim 1, 2, 3 or 6] comprising the amino acid sequence of SEQ ID NO: 6, said method comprising:

a) incubating a candidate compound with said protein; and

b) determining the activity of said protein in the presence of said candidate compound,

wherein [a potential drug] the compound is selected when the activity of said protein in the presence of said candidate compound is measurably different than in the absence thereof.

10. (Once Amended) An isolated nucleic acid [molecule] consisting of 10 to 50 nucleotides which specifically hybridizes to the nucleic acid of claim 1 [to 6] under high stringency conditions, wherein said [nucleic acid molecule is or is complementary to a]

nucleotide sequence [consisting] a) consists of at least 10 consecutive nucleotides from [said] the nucleic acid sequence set forth in SEQ ID NOs: 1, 3 or 5, or b) is complementary to at least 10 consecutive nucleotides from the nucleic acid sequence set forth in SEQ ID NOs: 1, 3, or 5.

11. (Once Amended) A method of detecting the nucleic acid of claim 4, 5, or 6 [CaKRE5, CaALR1 or CaCDC24] in a sample comprising:

a) contacting said sample with a nucleic acid [molecule] according to claim 10, under conditions such that hybridization occurs; and

b) detecting the presence of said [molecule] nucleic acid according to claim 10 bound to said [CaKRE5, CaALR1 or CaCDC24] nucleic acid of claim 4, 5, or 6.

12. (Once Amended) A purified [CaKRE5] polypeptide comprising an amino acid sequence as set forth in SEQ ID NO: 2 or an epitope-bearing portion thereof.

13. (Once Amended) A purified [CaALR1] polypeptide comprising an amino acid sequence as set forth in SEQ ID NO: 4 or an epitope-bearing portion thereof.

14. (Once Amended) A purified [CaCDC24] polypeptide comprising an amino acid sequence as set forth in SEQ ID NO: 6 or an epitope-bearing portion thereof.

15. (Once Amended) [The] A purified [CaKRE5] polypeptide [according to claim 12], comprising an amino acid sequence at least 35% identical over at least one sequence window of 18 amino acid residues to the amino acid sequence as set forth in SEQ ID NO: 2.

16. (Once Amended) [The] A purified [CaALR1] polypeptide [according to claim 13], comprising an amino acid sequence at least 35% identical over at least one sequence window of 18 amino acid residues to the amino acid sequence as set forth in SEQ ID NO: 4.

17. (Once Amended) [The] A purified [CaCDC24] polypeptide [according to claim 14], comprising an amino acid sequence at least 35% identical over at least one sequence window of 18 amino acid residues to the amino acid sequence as set forth in SEQ ID NO: 6.

18. (Once Amended) An antibody having specific binding affinity to the polypeptide or epitope-bearing portion thereof according to claim 12 [, 13 or 14].

19. (Once Amended) A method of screening for a compound having antifungal activity [through an interaction with a protein selected from CaKRE5, CaALR1 and CaCDC24], said method comprising:

a) incubating a candidate compound with [said] a protein comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 2, 4, and 6; and

b) determining one of the activity of said protein or [of] an assayable or observable property associated with a biological function of said protein in the presence of said candidate compound,

wherein a [potential] antifungal [drug] compound is selected when the activity or assayable or observable property of said protein in the presence of said candidate compound is measurably different than in the absence thereof.

24. (Once Amended) The method of claim 19 [or 20], wherein an *in vitro* assay is used.

25. (Once Amended) The method of claim 19 [or 20], wherein a cell-based assay is used.

26. (New) An antibody having specific binding affinity to the polypeptide or epitope-bearing portion thereof according to claim 13.

27. (New) An antibody having specific binding affinity to the polypeptide or epitope-bearing portion thereof according to claim 14.